

Clam Catch: Effects of Introduced Species on Indigenous Species

Purpose: Competition between species occurs when two species compete for a limited resource, such as space or food. An introduced species, such as the zebra mussel, can compete with a native species, such as the freshwater clam, and cause a change in the population of the native species.

Data Collection

- Use the data table to collect the results of the class game at each round.

PART 1 DATA

Year	Population of Clams
Initial	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

PART 2 DATA

Year	Population of Clams	Population of Mussels
Initial		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Graph of the Results

- Graph the population of clams & zebra mussels over time from Part 1 & Part 2
 - Use a *separate sheet of paper to turn with this sheet!*
 - Use the data table to make a line graph
 - Use a key & different color to show what represents the clam population and what represents the zebra mussel population as follows:
 - a. Clam without competition
 - b. Clam with competition
 - c. zebra clam

Questions for Part One: Clam Population

- Look at your graph and describe how this population of clams changed over time.

- What are the strengths of this model?

- What are the limitations of this model?

Name _____ Date _____ Period _____

6. What factor(s) limited the size of the clam population in this model?

7. What factor(s) limited the size of the clam population in the natural world?

8. What would you predict would happen to the clams in the next generation?

Questions for Part Two: Competition

9. Graph the population of clams and zebra mussels over time from Part Two of the Procedure.

- Use the same graph from Part 1
- Use a key & different color to show what represents the clam population and what represents the zebra mussel population.

10. Look at your graph and describe population trends of *clams* & *zebra mussels* over time.

11. Explain the cause of the population changes in this model.

12. What other living or non-living factors could be introduced into an ecosystems that could also effect clam population? List them.

13. Bull-frogs, blackberries, brown slugs, and milfoil are all introduced species to the Pacific Northwest. Pick one and explain how this might affect your ecosystem.
